

Notice of Allowability

Application No.

10/603,256

Examiner

Ishwar (I. B.) Patel

Applicant(s)

OKUMICHI ET AL.

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to June 25, 2003.
2. ☒ The allowed claim(s) is/are 1-18.
3. ☒ The drawings filed on 25 June 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Allowable Subject Matter

1. Claims 1-18 are allowed.

2. The following is an examiner's statement of reasons for allowance: Multilayer circuit board with via hole connecting top surface of the board with the bottom surface as disclosed by following patents are known in art.

Miller, US Patent No. 6,617,526, discloses a coaxial signal via 104 connected to signal net 114, surrounded by the ground via 106 connected to at least two ground layers.

Schumacher et al., US Patent No. 5,381,306, in figure 1 discloses multiple plane power via matrix.

Nakayama et al., US Patent No. 5,726,863, in figure 4, discloses a multilayer printed circuit board with plurality of power supply through hole 20 and signal through holes 19.

Dougherty, Jr., US Patent No. 3,739,469, in figure 4, discloses a multilayer printed circuit board with concentric through via hole 4.

However, multilayer circuit board with the limitations "signal-wiring connecting conductors provided on the upper surface of the uppermost dielectric layer and on the lower surface of the bottommost dielectric layer and connecting the signal wiring conductors of the uppermost and bottommost dielectric layers with the signal via conductors"; "via conductor connecting conductors provided on the upper surfaces of the respective intermediate dielectric layers and the bottommost dielectric layer and

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connecting the signal via conductors of the respective dielectric layers with those of the dielectric layers right there above;" and "grounding-conductor via conductors vertically penetrating the respective intermediate dielectric layers and connecting the respective grounding conductors at a plurality of positions around the grounding-conductor non-forming areas of the respective dielectric layers", along with other claimed limitations has not been disclosed or suggested by the prior art of record and no motivation was found to combine above references.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ishwar (I. B.) Patel whose telephone number is (571) 272 1933. The examiner can normally be reached on M-F (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (571) 272 1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ishwar (I. B.) Patel
Examiner
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February 27, 2005



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